

AMENDMENTS TO THE CLAIMS

Claims 1-12 (Canceled)

13. (Previously Presented) Surgical apparatus for accessing a beating heart via a xyphoid incision, said apparatus comprising:

a main body configured to rest against the frontal body of a patient in a resting position; and
a lifting arm movably mounted to said main body and adapted to engage a lowermost rib of the patient and lift at least a portion of the ribs of the patient, relative to a remainder of the patient's body below the rib cage, while said main body maintains said resting position against the frontal body of the patient, when the patient is positioned horizontally.

14. (Previously Presented) The apparatus of claim 13, further comprising at least one contact point through which said main body rests against the frontal body of the patient, said at least one contact point providing support and stabilization during lifting by said lifting arm.

15. (Previously Presented) The apparatus of claim 14, comprising two contact points, and wherein said lifting arm is mounted to said body at a location intermediate of said two contact points.

16. (Previously Presented) The apparatus of claim 14, comprising three contact points, wherein said lifting arm engages the ribs in a location that is intermediate to said three contact points.

17. (Previously Presented) The apparatus of claim 13, further comprising a retractor arm mounted to said main body and adapted to engage and spread a portion of the ribs with respect to the remainder of the ribs, in a direction different from a direction of said lifting.

18. (Previously Presented) The apparatus of claim 17, wherein said retractor arm comprises a hinge to enhance positioning of a distal end of said retractor arm to engage the ribs.

19. (Previously Presented) The apparatus of claim 17, further comprising a first driving mechanism for driving said lifting arm with respect to said body to perform lifting, and a second driving

mechanism for driving said retractor arm with respect to said body to perform said spreading.

20. (Previously Presented) The apparatus of claim 17, further comprising a driving mechanism for driving said lifting arm and said retractor arm with respect to said body to perform lifting and spreading.

21. (Previously Presented) The apparatus of claim 13, further comprising a driving mechanism for driving said lifting arm with respect to said body to perform lifting.

22. (Previously Presented) The apparatus of claim 17, wherein said retractor arm is rotatably mounted to said body.

23. (Previously Presented) The apparatus of claim 22, wherein said retractor arm is mounted to said body via a hinge.

24. (Previously Presented) The apparatus of claim 13, further comprising a beating heart stabilizer mounted on said body.

25. (Previously Presented) The apparatus of claim 17, further comprising a beating heart stabilizer mounted on said body.

26. (Previously Presented) The apparatus of claim 17, further comprising a beating heart stabilizer mounted on said retractor arm.

27. (Previously Presented) The apparatus of claim 13, further comprising an organ positioner fixed to said body.

28. (Previously Presented) The apparatus of claim 13, further comprising a tissue positioner fixed to said body.

29. (Previously Presented) The apparatus of claim 13, further comprising a light mounted to said apparatus.

30. (Previously Presented) The apparatus of claim 29, wherein said light comprises a fiber optic light.

31. (Previously Presented) Surgical apparatus for use in performing surgery by accessing a beating heart via a xyphoid incision, said apparatus comprising:

an offsetting retractor configured to rest against the frontal body of a patient, contacting the frontal body at a location over the ribs and a location inferior to the ribs, to provide stability during lifting at least a portion of the lower ribs of the patient, and having a lifting arm configured to engage and lift at least the portion of the lower ribs, while said retractor remains resting against the frontal body of the patient.

32. (Previously Presented) The apparatus of claim 31, further comprising a beating heart stabilizer mounted on said retractor.

33. (Previously Presented) The apparatus of claim 31, further comprising an organ positioner fixed to said retractor.

34. (Previously Presented) The apparatus of claim 31, further comprising a tissue positioner fixed to said retractor.

35. (Previously Presented) The apparatus of claim 31, further comprising a light mounted to said retractor.

36. (Previously Presented) The apparatus of claim 31, wherein said retractor further comprises a retractor arm adapted to engage and spread a portion of the ribs with respect to the remainder of the ribs, in a direction different from a direction of lifting by said lifting arm.

37. (Previously Presented) Surgical apparatus for accessing a beating heart via a xyphoid incision, said apparatus comprising:

a main body configured to rest against the frontal body of a patient in a resting position;

a lifting arm movably mounted to said main body and adapted to engage and lift at least a portion of the ribs of the patient, relative to a remainder of the patient's body below the rib cage, while said main body maintains said resting position against the frontal body of the patient, when the patient is positioned horizontally; and

a retractor arm mounted to said main body and adapted to engage and spread a portion of the ribs with respect to the remainder of the ribs, in a direction different from a direction of said lifting, wherein said retractor arm comprises a hinge to enhance positioning of a distal end of said retractor arm to engage the ribs.

38. (Previously Presented) Surgical apparatus for accessing a beating heart via a xyphoid incision, said apparatus comprising:

a main body configured to rest against the frontal body of a patient in a resting position;

a lifting arm movably mounted to said main body and adapted to engage and lift at least a portion of the ribs of the patient, relative to a remainder of the patient's body below the rib cage, while said main body maintains said resting position against the frontal body of the patient, when the patient is positioned horizontally; and

a retractor arm mounted to said main body and adapted to engage and spread a portion of the ribs with respect to the remainder of the ribs, in a direction different from a direction of said lifting, wherein said retractor arm is rotatably mounted to said body.

39. (New) The apparatus of claim 13, wherein said lifting arm is rotatably mounted to said main body and adapted to engage a lowermost rib of the patient and rotate relative to said main body to lift at least a portion of the ribs of the patient, relative to a remainder of the patient's body below the rib cage, while said main body maintains said resting position against the frontal body of the patient, when the patient is positioned horizontally.